

551717

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
14 October 2004 (14.10.2004)

PCT

(10) International Publication Number  
**WO 2004/087862 A2**

(51) International Patent Classification<sup>6</sup>: C12N  
(21) International Application Number: PCT/IL2004/000286  
(22) International Filing Date: 29 March 2004 (29.03.2004)  
(25) Filing Language: English  
(26) Publication Language: English  
(30) Priority Data: 60/458,954 1 April 2003 (01.04.2003) US

(71) Applicants (for all designated States except US):  
YISSUM RESEARCH DEVELOPMENT COMPANY OF THE HEBREW UNIVERSITY OF JERUSALEM [IL/IL]; P.O.Box 39135, Jerusalem, 91390 (IL). GESELLSCHAFT FUR BIOTECHNOLOGISCHE FORSCHUNG (GBF) [DE/DE]; Mascheroder Weg1, 38124 Braunschweig (DE). FLANDERS INTERUNIVERSITY FOR BIOTECHNOLOGY VZW (VIB) [BE/BE]; Rijvisschestraat 120, Zwijnaarde, B-9052 (BE). K.U. LEUVEN RESEARCH & DEVELOPMENT [BE/BE]; Groot Begijnhof 58-59, Leuven, B-3000 (BE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): GAZIT, Dan [IL/US]; PO Box 800420, University of Virginia, Charlottesville, Virginia 22908 (US). PELLED, Gadi [IL/IL]; 2 Hanarkis Street, Rishon Lezion, 75424 (IL). TURGE-MAN, Gadi [IL/IL]; 216 Machal Street, Jerusalem,

97763 (IL). HOFFMANN, Andrea [DE/DE]; Koenigs-berger-Ring 37, 30655 Hannover (DE). GROSS, Gerhard [DE/DE]; Fasanenstr. 17, 38102 Braunschweig (DE). WODARCZYK, Claas [DE/DE]; Heinrichstrasse 38, 38106 Braunschweig (DE). VERSCHUEREN, Kristin [BE/BE]; Twee Leeuwenstraat 22, Everberg, B-3078 (BE).

(74) Agents: EITAN PEARL LATZER & COHEN-ZEDEK et al.; 7 Shenkar Street, Herzlia, 46725 (IL).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

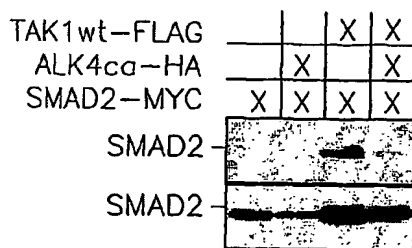
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

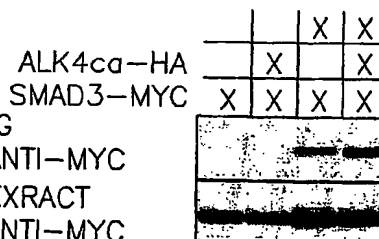
— without international search report and to be republished upon receipt of that report

[Continued on next page]

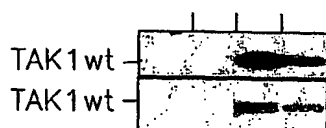
(54) Title: TAK1-MEDIATED INHIBITION OF OSTEOGENESIS



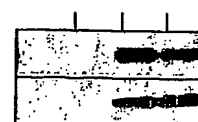
IP: ANTI-FLAG  
WESTERN: ANTI-MYC  
CELLULAR EXTRACT  
WESTERN: ANTI-MYC



SMAD3  
SMAD3



IP: ANTI-FLAG  
WESTERN: ANTI-FLAG  
CELLULAR EXTRACT  
WESTERN: ANTI-FLAG



TAK1wt  
TAK1wt

(57) Abstract: This invention is directed to methods, nucleic acids and compositions in TAK1-mediated regulation of SMAD activity. Promotion of TAK1 interaction with MH2 domains in SMADs negatively regulates SMAD biological activity. BMP-mediated SMAD activity is subject to TAK1 effects.



WO 2004/087862 A2



---

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*